



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of: 10/622,889

CASE NO.: CL1941 US NA

APPLICATION NO.: 10/622,889

GROUP ART UNIT: UNKNOWN

FILED: JULY 17, 2003

EXAMINER: UNKNOWN

FOR: NANOPARTICLE FRACTIONATION AND SIZE DETERMINATION

**INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

In compliance with 37 CFR 1.97 and 1.98, Applicants bring to the attention of the U.S. Patent and Trademark Office information listed on the enclosed PTO/SB/08A and PTO/SB/08B . A copy of the information is also enclosed.

For the Examiner's convenience Applicants additionally enclose a CD rom containing a copy of PTO 1449 in MS Word format containing hyperlinks to the full text of all cited references.

Should any fee be required in connection with the filing of this Information Disclosure Statement, please charge such fee to Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Company).

Respectfully submitted,

  
**S. NEIL FELTHAM**  
Attorney for Applicant(s)  
Registration No. 36,506  
Telephone: (302) 992-6460  
Facsimile: (302) 892-7949

Dated: 2/25/03

Enclosures

I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: COMMISSIONER FOR PATENT, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450, ON THIS DATE.

  
DATE

MARY BETH PITCHER



Please type a plus sign (+) inside this box

→ +

PTO/SB/08A (08-00)

Approved for use through 10/31/2002, OMB 0651-0031

Approved for use through 10/31/2022. GPO 2007-093

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**Substitute for form 1449A/PTO**

## **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheer

1

T

Complete if Known	
Application Number	10/622,889
Filing Date	July 17, 2003
First Named Inventor	Huang et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	CL1941 US NA

## **U.S. PATENT DOCUMENTS**

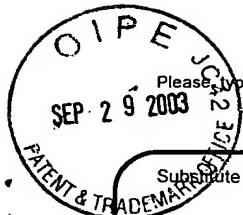
## **FOREIGN PATENT DOCUMENTS**

<b>Examiner Signature</b>		<b>Date Considered</b>	
-------------------------------	--	----------------------------	--

**\*EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box

→

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

2

of

2

### Complete if Known

Application Number	10/622,889
Filing Date	July 17, 2003
First Named Inventor	Huang et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	CL1941 US NA

### OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Niemeyer et al., Nanoparticles, Proteins, and Nucleic Acids: Biotechnology Meets Materials Science, Angew. Chem. Int. Ed. 40: pp. 4128-4158, 2001	
		Templeton et al., Water-Soluble, Isolable Gold Clusters Protected by Tiopronin and Coenzyme A Monolayers, Langmuir 15: pp. 66-76, 1999	
		Templeton et al., Redox and Fluorophore Functionalization of Water-Soluble, Tiopronin-Protected Gold Clusters, J. Am Chem. Soc. 121: pp. 7081-7089, 1999	
		Wei et al., Separation of nanometer gold particles by size exclusion chromatography, J. Chromatogr. A. 836, pp. 253-260, 1999	
		Wei et al., Shape Separation of Nanometer Gold Particles by Size-Exclusion Chromatography, Anal. Chem. 71: pp. 2085-2091, 1999	
		Schaaff et al., Isolation and Selected Properties of a 10.4 kDa Gold: Glutathione Cluster Compound, J. Phys. Chem. 102: 10643-10646, 1998	
		Schnabel et al., Characterization of Colloidal Gold Nanoparticles According to Size by Capillary Zone Electrophoresis, J. Microcolumn Separations 9: 529-534, 1997	
		Whetten et al., Nanocrystal Gold Molecules, Adv. Mater. 8: pp. 428-433, 1996	
		Chen et al., Poly(N-vinylisobutyramide)-stabilized platinum nanoparticles: synthesis and temperature-responsive behavior in aqueous solution, Colloids and Surfaces A, 169: pp. 107-116, 2000	
		Wuelfing et al., Nanometer Gold Clusters Protected by Surface-Bound Monolayers of Thiolated Poly(ethylene glycol)Polymer Electrolyte, J. Am. Chem. Soc. 120: pp. 12696-12697, 1998	
		Chan et al., Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection, Science 281: 2016-2018, 1998	
		Mitchell et al., Programmed Assembly of DNA Functionalized Quantum Dots, J. Am. Chem. Soc. 121: 8122-8123, 1999	
		Napper, Steric Stabilization, J. Colloid. Interface. Sci. 58: pp. 390-407, 1977	

Examiner Signature	Date Considered
--------------------	-----------------

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>2</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.